

Structure

The goal of an effective wildfire protection plan is to keep the fire from coming dangerously close to any structure on the property. Once ignited, the structure itself can become a fire source that can generate wind-driven embers that will threaten and could ignite neighboring properties. Fire science has shown properties located less than 15 feet apart are particularly vulnerable to this type of fire spread. If a structure has combustible siding, such as wood, vinyl and other types of plastic, good defensible space will reduce the fire risks. If the wildfire is allowed to come close to or reach the building and ignite the siding, flames can quickly spread up the wall and potentially break windows. Flames also can ignite the eaves, move into the stud cavity at a lap joint, and burn into the attic.

Surroundings

Think of anything surrounding or even attached to a structure on the property as a potential wick that could drive the fire dangerously close. This might include something as unassuming as playground equipment or the stack of fire wood that under normal circumstances would make for an inviting indoor environment. Remember wind-driven fire embers, not flames are the biggest threat to properties during a wildfire. Once these embers land on a combustible material, the potential for the wildfire to spread is significantly greater.

Defensible Space Zones

Locking the front door, installing a security system and adding motion-detection lighting are all things security experts recommend for keeping intruders out. Think of defensible space zones the same way. Each zone acts as a layer of protection between your house or business and the approaching wildfire. Keep in mind, just as with home security systems, these zones are only as effective if they are properly maintained.



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REDUCING WILDFIRE RISK

Residential



According to IBHS, one-third of U.S. homes are located in the Wildland Urban Interface (WUI), areas that combine housing developments with natural topography, trees, and vegetation. In recent years, homes in these areas have become common casualties of hard-to-control wildfires. Even if you're located outside the boundaries of the WUI, you can sustain significant fire damage. Burning embers can be blown into the area, ahead of the fire front, and can start fires by landing on hazardous parts of the building. Deck and patio furniture, lounge chair cushions, awnings, wood piles, and areas where pine needles or leaves accumulate are some of the places where embers can collect and possibly ignite the structure.

Yard Structures

Arbors, pergolas or trellises, playground equipment, boats, RV's, firewood and other combustible items can allow fire to touch the building. Relocate when possible at least 30 feet from the house and choose noncombustible or ignition-resistant building materials when possible.

Propane and LP tanks

Relocate the propane tanks at least 30 feet from your house or, if relocation is not an option, create a 10-foot noncombustible zone around the tank. An alternative solution is to enclose the tank using noncombustible materials.

Attachments

Decks, patios and porches often are attached to the house and can act as a wick bringing flames to the building. Use ignition-resistant building materials and keep the top and underneath clear of debris and combustible items. Enclosing the bottom of your elevated deck, patio or porch or screening the top area are both good options for reducing fire risks. Combustible fences also can be a hazard; separate the fence from the house by using a metal gate.

Proximity to Surrounding Properties

Houses located less than 15 feet apart can be significantly threatened by neighboring properties ignited by wildfire. Work with neighbors to reduce the risk of cluster burning, which can wipe out an entire block of properties within hours.

Windows

Radiant heat from a wildfire can easily shatter singlepane windows; choose tempered glass and preferably dual-pane windows for increased protection. An open window is vulnerable to the entry of embers, so make sure your windows are closed.

Roofs and Gutters

Choose a Class A fire-rated roof covering, which is a roofing material described by an Underwriter's Laboratory rating system as being noncombustible and capable of withstanding severe fire exposure without igniting. Keep the roof and gutters clear of debris through regular maintenance.

Vents

Attic and crawlspace vents are the most likely entry points for firebrands. Cover with 1/8-inch metal mesh screens (usually the finest mesh allowed by the building code). Flying embers driven by gusty winds often pose the biggest fire threat to structures. Embers can enter through vents and burn a house from the inside out.

Defensible Space Zones

0-5 FEET (OR TO THE PROPERTY LINE):

Because this zone is closest to the house it requires the most thinning, pruning and horizontal separation of trees and other vegetation. The objective is to reduce the chance that ignited vegetation will provide a path for flames to reach the building. Avoid using combustible mulch products, such as wood, bark and rubber mulch, particularly small pieces of bark or those with hairy components such as "gorilla hair" mulch. Carefully maintain vegetation by removing dead material on and underneath plants. Plants adjacent to combustible siding, as well as plants under or next to windows or interior corners present the greatest hazard. Avoid plants with the following characteristics:

1. Generate ground litter from bark, leaves, or seeds that slough off
2. Have (very low moisture content) dead material within the plant
3. Have small branches and needles that can easily ignite
4. Have a high resin or volatiles content

5-30 FEET (OR TO THE PROPERTY LINE):

Trees and other vegetation here should be maintained and dead plant materials and tree branches removed. The objective is to slow down and reduce the energy of the wildfire. Relocate outbuildings at least 30 feet away from the house or create defensible space within 10 feet around the outbuilding. In this zone, any surface fire shouldn't be able to burn to the building. This can be accomplished by pruning lower branches in trees and removing nearby shrubs (the ladder fuels), so that the fire cannot move back into the tree crown, additionally separate groups of non-tree vegetation to make it more difficult for fire to move horizontally. Embers may still be able to ignite individual islands of plants, and that is why plant selection and maintenance is so critical in the 0-5 feet zone.

30-100 FEET (OR TO THE PROPERTY LINE):

Wildfires burn up a slope faster and more intensely than on flat ground. A steeper slope will result in a faster moving fire, with longer flame lengths. Determine the slope of your structure. If your house is mid-slope or at the top of a steep slope, but set back less than 15 feet for a single-story and 30 feet for a two-story house, be more aggressive with your vegetation modification and maintenance plan and more aware of the building materials used. A target for the extended fuel modification area would be between 150 and 200 feet.